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09/724,714

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08/10/2007

EXAMINER

MEHRA, INDER P

ART UNIT

PAPER NUMBER

2617

MAIL DATE

DELIVERY MODE

08/10/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/724,714

Applicant(s)

CAREW ET AL.

Examiner

Inder P. Mehra

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 2/15/2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 58-114 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 58-114 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 November 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment with Pre-Appeal Brief Request

1. This is in response to "Pre-Appeal Brief" Request dated 2/15/2007, which has been fully considered and made of record. Based on this "Pre-Appeal Brief" dated 2/15/2007, claims 1-57 were cancelled previously, and claims 58-114 were added previously. Based on amendment dated 1/16/2007, claims 58, and 100 were amended. Claims 58-114 are now pending.

Terminal Disclaimer

2. The terminal disclaimer filed on 1/16/2007 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of any patent granted on Application Number 09/724,714 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Claim Objections

3. Claims 58-114 are objected to because of the following informalities:

Claims 89, 72, 89, 100 and 111 recite the following limitations in which limitation "common bus" is not supported by either the specifications or drawings. It was not part of original claim either:

- the telecommunication interface operable to provide the first telecommunication information and the second telecommunication information on a common bus;
and

receive the first and second telecommunication information from the common bus, the one or more packetization modules operable (see claim 58).

- transporting the first and second data packets over a common bus, (see claim 72);
- a packetization module operable to receive the telecommunication information from the common bus(see claim 89).
- transporting the received telecommunication over a common bus, (see claim 100);
- transport telecommunication information for each subscriber over a common bus, (see claim 111).

Refer to specification, page 22 lines 24-25, page 23 line 11, and refer to fig. 5, there are three buses, such as, buses 114, 118 and 120, and not "common bus" as recited by claims 58, 72, 89, 100 and 111. **This objection was not responded by applicant.**

Appropriate correction or clarification is required.

Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 58-65, 67, 72-79, 81, 89-95, 99-106 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Focsaneanu et al** (US patent Application No. 5,610,910), hereinafter, Focsaneanu in view of **Ko et al** (US Patent No. 5,479,407), hereinafter Ko.

For claims 58, 72, 89 and 100, Focsaneanu discloses a gateway (**access module 208, refer to fig. 7, col. 4 lines 64-65**) for communicating telecommunication information, **refer to col. 4 lines 64-67**; comprising:

- telecommunication interface module--- for a first subscriber and second telecommunication information for a second subscriber from a telecommunication network, wherein the first and second telecommunication information is received in any of a plurality of various formats (**format can be adapted, col. 7 lines 6-9**), (**Focsaneanu discloses, “step of extracting information content from user/subscriber profile/file to determine required services---between CPE and the communication network; determining appropriate routing; refer to col. 4 lines 40-57, and col. 5 line 12**), **the telecommunication interface operable to provide the first telecommunication information and the second telecommunication information on a common bus** (**Focsaneanu discloses, “common bus, refer to col. 14 lines 9-11**);;
- one or more packetization modules (**PAD 254-packet assembly/ disassembly device, fig. 8, col. 8 lines 20-22**)--- **receive the first and second telecommunication information from the common bus, the one or more packetization modules**(**Focsaneanu discloses “common bus”, col. 14 lines 9-11**) operable to generate first data packets --- the first telecommunication information to a first customer premises equipment (CPE) --- a first data communication protocol --- the first subscriber and --- second data packets --- the second telecommunication information --- a second data communication protocol ---second subscriber; (**refer to**

col. 5 lines 2-12, “ an access module (gateway) includes ---user profiles, services provided---address correlation table or protocol conversion table ---determine routing—converting address and or protocol routing the extracted information content and or protocol altered information through appropriate network resources and similar or dissimilar CPEs according to information stored in the storage, a CPE request and or network status information”) , (refer further to “routing table”, “customer profile” , “address conversion table”, “protocol conversion table”, routing table”, “service provider profile”(248 in fig. 8)), (refer to”interfacing CPEs”, col. 6 line 55-57);

- **wherein the first and second data communication protocols are selected from any of a plurality of various protocol types, (refer further to “routing table” 248, “customer profile” , “protocol conversion table” 248 , protocol adaptation to better match the terminals, col. 7 lines 5-9, and “possible network interfaces include FRAME RELAY, SMDS, ATM, TCP/IP”, col. 11 lines 5-6).**
- **a memory operable to store subscriber profiles---telecommunication interface, as recited by claim 89, (an access module (gateway), further, includes a storage (memory) for storing information concerning user profile (subscriber profile), refer to col. 5, lines 2-6; database (memory) , (248 in fig. 8), includes “customer profile”, refer to col. 8 lines 14-16);**

Focsaneanu does not disclose explicitly the following limitation, (However, Focsaneanu

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discloses, “common bus and LAN protocols between the access module and the various services providers or the data networks or the CPE connector”, as explained above, also refer to col. 14 lines 10-12).

Ko discloses more explicitly “**common bus within gateway along with use of different protocols**”, refer to figs. 7-11, col. 6 lines 18-37, **selectively processing packets---peer protocols**, col. 6 line 66 through col. 7 line 12; **packet distribution using protocols**, refer to col. 8 lines 38-46.

It would have been obvious to the person of ordinary skill in the art at the time the invention to use the capability of one or more packetization modules operable to receive the first and second telecommunication information from the common bus, --- wherein the first and second data communication protocols are selected from any of a plurality of various protocol types, as taught by Ko in figs. 7-11. The capability can be provided inside the gateway. The motivation for using this capability is to provide logical assignments in real time, refer to Ko’s col. 14 lines 13-15.

For claims 59, 61, 73, 75, 90, 92, 101 and 103, Focsaneanu discloses each of a plurality subscribers is associated with a separate telecommunication interface, (**determine service requested, refer to col. 4 lines 45-48; and “the telecommunication interface module is further operable-----the first telecommunication”, refer to col. 4 lines 45-48, user profile, service provider profile, analyzes the contents of a data connection request to identify the service requested, col. 8 lines 15-19).**

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For claims 60, 74, 91 and 102, Focsaneanu discloses the telecommunication interface---- analog line----switch, **(POTs, refer to col. 7 lines 29-32 and fig. 7, col. 10 line 46-51, PSTN – POTs, alter the state of access , col. 9 lines 49-51 and “analog/digital conversion” col. 9 lines 58-59).**

For claims 62, 76, 93 and 104, Focsaneanu discloses, “the subscriber identifier is a name address, or telephone number, **(refer to user profile and address table, col. 8 lines 16-17, address conversion col. 8 line 30, col. 13 lines 62-67).**

For claims 63, 77, 94 and 105, Focsaneanu discloses, “one or more compression modules operable-----subscriber”, **(refer to (compression techniques, col. 7 line 3, 552 col. 11, lines 20-22, compression algorithm 710, col. 12 line 60).**

For claims 64 and 78, Focsaneanu discloses, “memory operable to store first subscriber profile----compression algorithm---”; **(compression techniques at gateway, refer to col. 7 line 3 ; and database, refer to col. 8 line 24 and compression techniques utilized at the access module which includes database (memory) 248 in fig. 7, col. 7 lines 3 and col. 11 lines 15-21).**

For claims 65 and 79, Focsaneanu discloses “management module **(246 of fig. 8)** operable to select, for the first subscriber, a compression module supporting the first compression algorithm **(compression techniques, col. 7 line 3, 552 col. 11, lines 20-22,**

compression algorithm 710, col. 12 line 60); and a packetization module supporting the first data communication protocol, (refer to PAD 254, fig. 7, protocol conversion, col. 8 lines 30-33).

For claims 67, 81, 95, 99 and 106, Focsaneanu discloses all the features of claims 58, 72 and 89, including: “one or more network interface modules (line interfaces 236, 256 in fig. 7, col. 8 lines 1-2 and 25-26) operable to communicate the first data packets----using first data link-----second data link-----second subscriber, **(refer to interfacing CPEs, determining appropriate routing prior to interfacing CPEs, col. 4 lines 40-42, col. 5 lines 8-12, col. 6 lines 56-57, col. 7 lines 10-14 and 26-29).**

6. Claims 66, 69-70, 80, 83-84, 97, 108 and 110 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Focsaneanu et al**, hereinafter, Focsaneanu, in view of **Ko, Pounds et al** (US Patent No. 6,560,222), hereinafter, **Pounds**, further in view of **Bist et al** (US Patent No. 2002/0064139), hereinafter, Bist.

For claims 66, 69-70, 80, 83-84, 97, 108 and 110, Focsaneanu in view of Ko disclose all the features and limitations of claims 66, 69-70, 80, 83-84, 97, 108 and 110 with the exception of the following limitation, which are disclosed by Ponds and Bist, as follows:

- Pounds discloses “a management module operable to select a compression module----compression algorithm---, col. 8 lines 3-4, to assign at least *one time slot of a time division multiplexing (TDM) bus* to communicate the first telecommunication information--“; refer to control processor, col. 8 lines 60-63;

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- Ponds discloses, “a time division multiplexing (TDM) bus--- packetization module--- to communicate the first telecommunication information----one or more time slots; and a data packet bus---packetization module”, **as recited by claims 70, 84, 97, 108, 110**, refer to col. 8 lines 10-12, and 60-63 ;
- Ponds discloses partially, “one or more echo cancellation modules ----on the first telecommunication interface but not the second telecommunication information”, **as recited by claims 69, 83**, refer to col. 8 lines 25-27;

Focsaneanu in view of Ko and Pounds do not disclose expressly whether echo cancellation be used in the second telecommunication information, as recited by claims 69 and 83.

Bist discloses *“echo cancellation modules ----on the first telecommunication interface,(echo cancellation ---selectively disable and enable the training of echo – canceller, paragraph 0246”*

It would have been obvious to a person of ordinary skill in the art at the time of the invention to assign at least *one time slot of a time division multiplexing (TDM) bus and echo cancellation* to communicate the first telecommunication information. The capability of using time slots of a time division bus is provided by combining it in access module 234 of fig. 8. The suggestion/motivation to do so would have been to provide desired characteristics of voice data signals for customer premises network which uses broadband to deliver all services and also to save bandwidth.

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7. Claims 68, 82, 86-88, 111-114 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Focsaneanu** in view of **Ko**, as above, further in view of **Lor** (US Patent No. 6,201,562).;

For claims 68, 82, 86, 111 and 112, Focsaneanu discloses a system for communicating telecommunication information, **refer to col. 4 lines 40-42 and fig. 7**); comprising:

- Gateway (access module 208 in fig. 7) operable to associate each of a plurality of subscribers with a data communication protocol, to receive telecommunication information for subscribers from telecommunication network (**step of extracting information content from user/subscriber profile/file to determine required services---between CPE and the communication network; determining appropriate routing**);, **refer to 208 of fig. 7, refer to col. 4 lines 40-67**), and to
- generate data packets (**PAD 254 in fig. 7**) communicating each subscriber's telecommunication information to each subscriber's customer premises equipment according to the data communication protocol associated with each subscriber(**refer to col. 5 lines 2-12, “ an access module (gateway) includes ---user profiles, services provided---address correlation table or protocol conversion table --- determine routing—converting address and or protocol routing the extracted information content and or protocol altered information through appropriate network resources and similar or dissimilar CPEs according to information stored in the storage, a CPE request and or network status information”**) , (**refer further to “routing table”, “customer profile” , “address conversion table”, “protocol conversion table”, routing table”, “service provider profile”(248 in fig. 8)), (refer to “interfacing CPEs”, col. 6 line 55-57)**);,

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- wherein the data communication protocol is selected from any of a plurality of various protocol types(refer further to **“routing table” 248, “customer profile” , “protocol conversion table” 248 , protocol adaptation to better match the terminals, col. 7 lines 5-9, and “possible network interfaces include FRAME RELAY, SMDS, ATM, TCP/IP”, col. 11 lines 5-6).**,
- wherein the telecommunication information is received in any of a plurality of various formats(format can be adapted, col. 7 lines 6-9);

Focsaneanu does not disclose explicitly the following limitation, such as common bus inside gateway associated with protocols for different subscribers, (However, Focsaneanu discloses, “common bus and LAN protocols between the access module and the various services providers or the data networks or the CPE connector”, as explained above, also refer to col. 14 lines 10-12).

Ko discloses more explicitly **“common bus within gateway along with use of different protocols”**, refer to figs. 7-11, col. 6 lines 18-37, **selectively processing packets---peer protocols**, col. 6 line 66 through col. 7 line 12; **packet distribution using protocols**, refer to col. 8 lines 38-46.

Focsaneanu in view of Ko does not discloses the following limitations, which are disclosed by Lor, as follows:

“wherein the first data link communicates the first data packets to a digital subscriber line access multiplexer (DSLAM); and the second data link communicates the second data packets to a cable modem termination system (CMTS) or a base station controller (BSC), as recited by claims 68, 82, 86, and 112”, refer to fig. 6, col. 6 lines 52-62;

It would have been obvious to a person of ordinary skill in the art at the time of the invention to use DSLAM and CMTS . These capabilities can be implemented by using the systems used by Lor at CPE. The suggestion/motivation to do so would have been to provide desired characteristics for customer premises network which uses broadband to deliver all services at high bandwidth.

For claims 87-88 and 113-114, Focsaneanu in view of Ko discloses all the limitations of subject matter, including the following limitations:

- “communicating the second data packets to a base station controller (BSC) using second data communication protocol, **as recited by claims 87-88 and 113-114**, refer to col. 2 lines 10-13 and fig. 2;
- “communicating the second data packets from the BSC to a wireless network interface unit (WNIU) using a wireless link, **as recited by claims 87-88 and 113-114**, refer to col. 2 lines 10-13, fig. 2.

Focsaneanu in view of Ko does not disclose the following limitations, which are disclosed by Lor

Lor discloses, “where in the first data link communicates the first data packets to a digital subscriber line access multiplexer (DSLAM), **as recited by claim 87 and 114**; and the second data link communicates the second data packets to a cable modem termination system (CMTS)”, **as recited by claim 88**, refer to col. 6 lines 52-65;

It would have been obvious to a person of ordinary skill in the art at the time of the invention to use DSLAM and CMTS as taught by Lor. These capabilities can be implemented by

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using the systems used Lor at CPE. The suggestion/ motivation to do so would have been to provide desired characteristics for customer premises network which uses broadband to deliver all services at high bandwidth.

8. Claims 71, 85 and 98 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Focsaneanu** in view of **Ko, as above**, further in view of **Roposh** (US Patent No. 5,396,494);

For claims 71, 85 and 98, Focsaneanu in view of **Ko** discloses all the limitations of subject matter, with the exception of the following limitations, which are disclosed by Roposh, as follows:

- an IEEE 802.6 bus coupled to the packetization modules, the IEEE 802.6 bus operable to communicate the first and second telecommunication information to the packetization modules and to communicate the first and second data packets from the packetization modules, refer to col. 8 lines 5-11.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to use the capability of using IEEE 806.2 bus . This capability can be implemented by using the systems used by Roposh. The suggestion/motivation to do so would have been to transmit over the bus data and overhead in Metropolitan Area Network.

9. Claims 96, 107 and 109 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Focsaneanu** in view of **Ko, further**, in view of **Mills** (US Patent No. 2002/0057701);

For claims 96, 107 and 109, Focsaneanu in view of **Ko** discloses all the limitations of subject matter, with the exception of the following limitations, which are disclosed by Mills, as follows:

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- an echo cancellation module operable to perform echo cancellation on the telecommunication information according to whether the subscriber's profile indicates that the echo cancellation module should perform echo cancellation on the subscriber's telecommunication information, refer to Mills's paragraphs 0026 and 0027.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to use the capability of using IEEE 806.2 bus . This capability can be implemented by using the systems used Mills. The suggestion/motivation to do so would have been to transmit over the bus data and overhead in Metropolitan Area Network.

Response to Arguments

10. Applicant's arguments filed with "Pre-Appeal Brief Conference Request" dated 2/15/2007 have been fully considered but they are not persuasive.

Applicant argues, "The Examiner also indicates that the Focsaneanu, et al. patent discloses a common bus between the access module (gateway) and the CPE connector. However, the bus between the access module and a particular CPE connector in the Focsaneanu, et al. patent is for a particular subscriber and thus not common to multiple subscribers. The claimed invention provides for a common bus within its gateway. There is no disclosure in the Focsaneanu, et al. patent that its access module, equated by the Examiner as the claimed gateway, uses a common bus. In fact, the access module of the Focsaneanu, et al. patent uses individual line interfaces 236, 256 each dedicated to a local access connection between the access module and separate CPE connectors. (See FIGURE 8 of the Focsaneanu, et al. patent) .

Thus, no information from multiple subscribers is ever placed on a common bus between a particular CPE connector and the access module let alone between elements within the access module of the Focsaneanu, et al. patent itself as required by the claimed invention. In addition, the packet assembly/disassembly device 254 of the Focsaneanu, et al. patent is not connected to a common bus carrying first and second telecommunication information from respective first and second subscribers. The packet assembly/disassembly device 254 of the Focsaneanu, et al. patent is on a line card dedicated to a single subscriber. Thus, the packet assembly/disassembly device 254 of the Focsaneanu, et al. patent cannot receive first and second telecommunication information from first and second subscribers let alone on a common bus as required by the claimed invention”.

In response, Examiner states that Claims 89, 72, 89, 100 and 111 recite the following limitations in which “common bus” is not supported by either the specifications or drawings:

Refer to specification, page 22 lines 24-25, page 23 line 11, and refer to fig. 5, there are three buses, such as, buses 114, 118 and 120, and not “common bus” as recited by claims 58, 72, 89, 100 and 111. Applicant did not respond to this objection raised in previous office action.

However, Focsaneanu discloses “common bus” explicitly, refer to col. 14 lines 9-11. In addition, Ko discloses common bus within gateway along with different protocols being used selectively, see office action above. However, Ko discloses more explicitly “**common bus within gateway along with use of different protocols**”, refer to figs. 7-11, col. 6 lines 18-37, selectively processing packets---peer protocols, col. 6 line 66 through col. 7 line 12; **packet distribution using protocols**, refer to col. 8 lines 38-46.

In light of above explanation, arguments by applicant are not persuasive.

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Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Inder P. Mehra whose telephone number is 571-272-3170. The examiner can normally be reached on Monday through Friday from 8AM to 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on 571-272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Inder Pal Mehra 8/2/07
Inder P Mehra
Examiner
Art Unit 2617